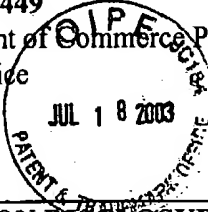


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| FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office  | Docket No.: INVIT1250-5 | Serial No.: 09/835,096 |
| | Applicant(s): Jay M. Short | |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT | Filing Date: 04/12/2001 | Group Art Unit: 1639 |

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U.S. PATENT DOCUMENTS

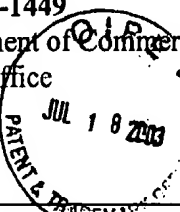
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|----------------|----|-----------------|------------|-------------------|-------|-----------|-------------|
| MC | AA | 4,959,309 | 09/25/1990 | Dattagupta et al. | 435 | 6 | |
| | AB | 5,207,163 | 12/1993 | Gold et al. | 435 | 6 | |
| | AC | 5,270,170 | 12/14/1993 | Schatz et al. | 435 | 7.37 | |
| | AD | 5,475,096 | 12/1995 | Gold et al. | 536 | 26 | |
| | AE | 5,510,240 | 04/23/1996 | Lam et al. | 435 | 7.1 | |
| | AF | 5,660,985 | 08/1997 | Pieken et al. | 435 | 6 | |
| | AG | 5,683,867 | 11/1997 | Biesecker et al. | 435 | 6 | |
| | AH | 5,705,337 | 01/1998 | Gold et al. | 435 | 6 | |
| MC | AI | 5,739,305 | 04/23/1996 | Cubicciotti et al | 536 | 23.1 | |

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| MC | AJ | 2 183 661 | 06/1987 | UK | C12N | 15/00 | |
| | AK | WO 89/06694 | 07/1989 | WO | C12P | 21/00 | |
| | AL | WO 91/14696 | 10/1991 | WO | C07H | 17/00 | |
| MC | AM | WO 92/14843 | 09/1992 | WO | C12Q | 1/68 | |

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| EXAMINER  | DATE CONSIDERED 10/7/04 |
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| FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office  | Docket No.: INVIT1250-5 | Serial No.: 09/835,096 |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT | Filing Date: 04/12/2001 | Group Art 1639 |

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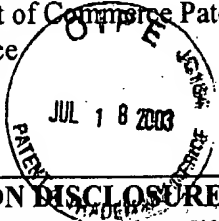
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| MC | AN | WO 95/07364 | 03/1995 | WO | C12Q | 1/68 | |
| | AO | WO 95/20591 | 08/1995 | WO | C07F | 5/02 | |
| | AP | WO 95/08003 | 03/1995 | WO | C12Q | 1/68 | |
| | AQ | WO 95/22625 | 08/1995 | WO | C12Q | 1/68 | |
| | AR | WO 95/31429 | 11/1995 | WO | C07C | 205/00 | |
| | AS | WO 96/04403 | 02/1996 | WO | C12Q | 1/68 | |
| | AT | WO 96/09316 | 03/1996 | WO | C07H | 21/02 | |
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| MC | AV | WO 96/27605 | 09/1996 | WO | C07H | 21/02 | |

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| MC | AW | Abelson, J. "Directed Evolution of nucleic acids by independent replication and selection" <i>Science</i> 249: 488-489 (1990) |
| | AX | Bartel, D.P. and Szostak, J.W. "Isolation of new ribozymes from a large pool of random sequences" <i>Science</i> 261:1411-1418 (1993) |
| | AY | Beaudry, A.A. and Joyce, G.F. "Directed Evolution of an RNA Enzyme" <i>Science</i> 257: 635-641 (1992) |
| | AZ | Cech, T.R. "The chemistry of self-splicing RNA and RNAEnzymes" <i>Science</i> 236: 1532-1539 (1987) |
| MC | BA | Conrad, R. et al. "Isozyme-specific inhibition of protein kinase C by RNA aptamers" <i>J. Biol. Chem.</i> 269: 32051-32054 (1994) |

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| EXAMINER  | DATE CONSIDERED 80/7/04 |
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| FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office | Docket No.: INVIT1250-5 | Serial No.: 09/835 096 |
|  | Applicant(s): Jay M. Short | |
| | Information Disclosure Statement by Applicant | |
| Information Disclosure Statement by Applicant | Filing Date: 04/12/2001 | Group Art Unit: 1639 |

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| MSR ✓ | BB | Crouch, G.J. and Eaton, B.E. "Synthesis of 2'-deoxyuridine nucleosides with appended 5-position carbonyl cross-linking groups" <i>Nucleosides & Nucleotides</i> 13: 939-944 (1994) |
| ✓ | BC | Dewey, T.M. et al. "New uridine derivatives for systematic evolution of RNA ligands by exponential enrichment" <i>J. Am. Chem. Soc.</i> 117: 8474-8475 (1995). |
| ✓ | BD | Ellington, A.D. and Szostak, J. W. Abstract of papers presented at the 1990 meeting on RNA Processing. Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, p226 (1990) |
| ✓ | BE | Freier, S.M. et al. " Mutational SURF : A strategy for improving lead compounds identified from combinatorial libraries" <i>Bioorganic & Medicinal Chemistry</i> 4:717-725 (1996) |
| ✓ | BF | Jensen, K.B. et al. "Characterization of an in vitro selected RNA ligand to the HIV-1 rev protein" <i>J. Mol. Biol.</i> 235:237-247 (1994) |
| ✓ | BG | Joyce, G.F. "Amplification, mutztion and selection of catalytic RNA" <i>Gene</i> 82:83-87 (1989) |
| ✓ | BH | Joyce, G.F. and Inoue, T. "A novel technique for the rapid preparation of mutant RNAs" <i>Nucleic Acids Research</i> 17:711-714 (1989) |
| ✓ | BI | Kinzler, K.W. and Vogelstein, B. " Whole genome PCR: Application to the identification of sequences bound by gene regulatory proteins" <i>Nucleic Acids Research</i> 17:3645-3653 (1989) |
| ✓ | BJ | Kramer, F.R. et al. "Evolution in vitro: sequence and phenotype of a mutant RNA resistant to Ethidium Bromide" <i>J. Mol. Biol.</i> 89: 719-736 (1974) |
| MSR ✓ | BK | Latham, J.A. et al. "The application of a modified nucleotides in aptamer selection: novel thrombin aptamers containing 5-(1-Pentyny)-2'-deoxyuridine" <i>Nucleic Acids Research</i> 22: 2817-2822(1994) |

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| FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office | Docket No.: INVIT1250-5 | Serial No.: 09/83 RECEIVED |
| | Applicant(s): Jay M. Short | |
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| INFORMATION DISCLOSURE STATEMENT BY APPLICANT | Filing Date: 04/12/2001 | Group Art Unit: 1639 |


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|------|----|---|
| MC ✓ | BL | Lestienne, P and Bieth, J.G. "Inhibition of human leucocyte elastase by polynucleotides" <i>Biochimie</i> 65: 49-52 (1983) |
| ✓ | BM | Levisohn, R. and Spiegelman, S. "The Cloning of a self-replicating RNA molecule" <i>Proc. Natl. Acad. Sci. USA</i> 60: 866-872 (1968) |
| ✓ | BN | Levisohn, R. and Spiegelman, S. "Further extracellular Darwinian experiments with replicating RNA Molecules: diverse variants isolated under different selective conditions" <i>Proc. Natl. Acad. Sci. USA</i> 63:805-811 (1969) |
| ✓ | BO | Lorsch, J.R. and Szostak, J.W. "In Vitro Evolution of new ribozymes with polynucleotide kinase activity" <i>Nature</i> 371: 31-36 (1994) |
| ✓ | BP | Ma, M.Y. et al. "design and synthesis of RNA miniduplexes via a synthetic linker approach" <i>biochemistry</i> |
| ✓ | BQ | Maxam, A.M. and Gillbert, W. "A new method for sequencing DNA" <i>Proc. Natl. Acad. Sci. USA</i> 74: 560-564 (1977) |
| ✓ | BR | McCorkle, G.M. and Altman, S. "RNA's as catalysts" <i>Journal of Chemical Education</i> 64: 221-226 (1987) |
| ✓ | BS | Nelson, J et al. "Incorporation of a non-nucleotide bridge into hairpin oligonucleotides capable of high-affinity binding to the rev protein of HIV-1" <i>Biochemistry</i> 35:5339-5344 (1996) |
| ✓ | BT | Oleksyszyn, J. and Powers, J.C. "Irreversible inhibition of serine proteases by peptide derivatives of (a-Aminoalkyl)phosphonate diphenyl esters" <i>Biochemical and Biophysical Research Communications</i> 161: 143-149 (1989). |
| MC ✓ | BU | Oleksyszyn, J. and Powers, J.C. "Irreversible inhibition of serine proteases by peptide derivatives of (a-Aminoalkyl)phosphonate diphenyl esters" <i>Biochemistry</i> 30: 485-493 (1991) |

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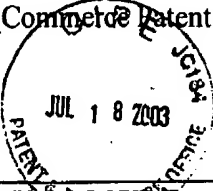
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| FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office | Docket No.: INVIT1250-5 | Serial No.: 09/83, 096 |
| JUL 18 2003 RECEIVED | Applicant(s): Jay M. Short | |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT | Filing Date: 04/12/2001 | Group Art Unit: 1639 |

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| mes | BV | Oliphant, A.R. et al. "Cloning of random-sequence oligodeoxynucleotides" <i>Gene</i> 44 : 177-183 (1986) |
| ✓ | BW | Oliphant, A.R. and Struhl, K. "The use of random-sequence oligonucleotides for determining consensus sequences" <i>Methods in Enzymology</i> 155 : 568-582 (1987) |
| ✓ | BX | Oliphant, A.R. and Struhl, K. "Defining the consensus of <i>E. Coli</i> . promoter elements by random selection" <i>Nucleic Acids Research</i> 16 : 7673-7683 (1988) |
| ✓ | BY | Oliphant, A.R. et al. "Defining the sequence specificity of DNA-binding proteins by selecting binding sites from random-sequence oligonucleotides analysis of yeast GCN4 protein" <i>Mol. Cell. Biol.</i> 9 : 2944-2949 (1989) |
| ✓ | BZ | Pan, T. and Unlenbeck, O.C. "In vitro selection of RNAs that undergo autolytic cleavage with Pb" <i>Biochemistry</i> 31 : 3887-3895 (1992) |
| ✓ | CA | Piccirilli, J.A. et al. "Aminoacyl esterase activity of the <i>Tetrahymena</i> Ribozyme" <i>Science</i> 256 : 1420-1424 (1992) |
| ✓ | CB | Prudent, J.R. et al. "Expanding the scope of RNA catalysis" <i>Science</i> 264 : 1924-1927 (1994) |
| ✓ | CC | Ren, X.F. et al. "Formation of stable DNA loops by incorporation of nonpolar, non-hydrogen-bonding nucleoside isosteres" <i>Angew. Chem. Int. Ed. Engl.</i> 35 : 743-746 (1996) |
| ✓ | CD | Robertson, D.L. and Joyce, G.F. "Selection <i>in vitro</i> of an RNA enzyme that specifically cleaves single-stranded DNA" <i>Nature</i> 344 : 467-468 (1990) |
| mes | CE | Rudinger, J. "Peptide Hormones", <i>J.A. Parsons Ed.</i> , pgs. 1-6, June 1976. |

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| FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office  | Docket No.: INVIT1250-5 | Serial No.: 09/835,941 |
| | Applicant(s): Jay M. Short | |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT | Filing Date: 04/12/2001 | Group Art Unit: 1639 |

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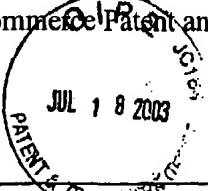
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| MCR | CD | Sakthivel, et al. "Expanding the potential of DNA for binding and catalysis: highly functionalized dUTP derivatives that are substrates for thermostable DNA polymerases" <i>Angew. Chem. Int. Ed.</i> 37 (20) : 2872-2875 (1998) |
| | CE | Simon, S. et al "Inhibition of human neutrophil elastase by polyguanylic acid and other Synthetic polynucleotides" <i>Adv. Exp. Med. Biol.</i> 240 : 65-74 (1988) |
| | CF | Simon, S. et al "Inhibition of human neutrophil elastase by polyguanylic acid and other Synthetic RNA homopolymers" <i>Exp. Lung. Res.</i> 14 : 85-99 (1988) |
| | CG | Smith, et al. "In vitro selection without intervening amplification" <i>Angew. Chem. Int. Ed.</i> 36 (17): 1879-1881 (1997) |
| | CH | Soukup, G. et al. "Preparation of oligonucleotide-biotin conjugates with cleavable linkers" <i>Bioconjugate Chem.</i> 6 : 135-138 (1995) |
| | CI | Thiesen, H. and Bach, C. "Target detection assay(TDA): a versatile procedure to determine DNA binding sites as demonstrated on SP1 protein" <i>Nucleic Acids research</i> 18 : 3203-3209 (1990) |
| | CJ | Tuerk, C. and Gold, L. "Systematic evolution of ligands by exponential enrichment: RNA ligands to bacteriophage T4 DNA polymerase" <i>Science</i> 249 :505-510 (1990) |
| | CK | Tyagi, S. "Taking DNA probes into a protein world" <i>Nature Biotechnology</i> 14 : 947-948 (1996) |
| | CL | Vered, M. et al. "Inhibition of human neutrophil elastase by bacterial polyanions" <i>Exp. Lung. Res.</i> 14 : 67-83 (1988) |
| | CM | Vlasova, I.E. and Vlasov, V.V "Molecular evolution: design of nucleic acids possessing Catalytic properties and capable of specific complex formation" <i>Molecular Biology</i> 27 : 1-5 (1993) |
| MCR | CN | Wiegand, T. et al. "Selection of RNA amides synthases" <i>Chemistry & Biology</i> 4 :675-683 (1997) |

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|  | CO | Xu, W. and Ellington, A "Anti-peptide aptamers recognize amino sequence and bind a protein epitope" <i>Proc. Natl. Acad. Sci. USA</i> 93 : 7475-7480 (1996) |
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